EXHIBIT 1

Trials@uspto.gov
571.272.7822

Paper 9
Entered: January 9, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS, LLC,
Petitioner,

v.

AK MEETING IP LLC,
Patent Owner.

IPR2022-01142
Patent 10,963,124 B2

Before ERIC C. JESCHKE, AMEE A. SHAH, and RYAN H. FLAX, *Administrative Patent Judges*.

FLAX, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

AK Meeting IP LLC ("Patent Owner") is the owner of U.S. patent 10,963,124 B2 ("the '124 patent"). Paper 4, 2. On June 22, 2022, Unified Patents, LLC ("Petitioner") filed a Petition for *inter partes* review challenging the patentability of claims 1–14 (all claims) of the '124 patent. Paper 1, 1 ("Pet."). On October 11, 2022, Patent Owner filed a Preliminary Response to the Petition. Paper 6 ("Prelim. Resp."). [1] With authorization, Petitioner responded to certain issues in the Response with a Preliminary Reply on November 11, 2022. Paper 8 ("Prelim. Reply").

Under 37 C.F.R. § 42.4(a), we have authority to determine whether to institute trial in an *inter partes* review. We may institute an *inter partes* review if the information presented in the petition filed under 35 U.S.C. § 311, and any preliminary response filed under § 313, shows that there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the petition. 35 U.S.C. § 314.

After reviewing the parties' submissions, we conclude Petitioner demonstrates a reasonable likelihood it would prevail in showing that claims of the '124 patent are unpatentable under the presented grounds. Therefore, we institute *inter partes* review of all challenged claims (1–14) under the grounds raised in the Petition, pursuant to 35 U.S.C. § 314. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018); 37 C.F.R. § 42.108(a) ("When instituting *inter partes* review, the Board will authorize the review

[1] Patent Owner's Preliminary Response includes line numbering on each page. This is unnecessary and somewhat burdensome on the panel in some instances. It is requested that the parties refrain from such line numbering in subsequent papers.

to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.").

A. REAL PARTIES-IN-INTEREST

Petitioner states "that Unified Patents, LLC is the real party-in-interest, and further certifies that no other party exercised control or could exercise control over Unified's participation in this proceeding, the filing of this petition, or the conduct of any ensuing trial." Pet. 73. Patent Owner identifies itself as the only real party-in-interest. Paper 4, 2.

B. RELATED MATTERS

Petitioner identifies the following as related matters: *AK Meeting IP LLC v. Adobe Inc.*, 6:22-cv-00247, 6:22-cv-00247 (W.D. Tex. Mar 8, 2022); *AK Meeting IP LLC v. Atos IT Solutions and Services Inc.*, 3:22-cv-00550 (N.D. Tex. Mar. 8, 2022) (terminated May 5, 2022); *AK Meeting v. Cisco Systems, Inc.*, 6:22-cv-00248 (W.D. Tex. Mar. 8, 2022); *AK Meeting IP LLC v. Fuze, Inc.*, 6:22-cv-00249 (W.D. Tex. Mar. 8, 2022); *AK Meeting IP LLC v. Juniper Networks, Inc.*, 2:22-cv-00073 (E.D. Tex. Mar. 8, 2022) (terminated Apr. 21, 2022); *AK Meeting IP LLC v. Lifesize, Inc.*, 6:22-cv-00251 (N.D. Tex. Mar. 8, 2022); and *AK Meeting IP LLC v. Zoho Corp.*, 6:22-cv-00250 (W.D. Tex. Mar. 8, 2022). Pet. 73.

Patent Owner identifies these same matters as related. Paper 4, 2. Patent Owner also identifies the lineage of related applications/patents listed on the face of the '124 patent for priority. *Id.*; *see also* Ex. 1001, code (63).

C. THE '124 PATENT[2]

The '124 patent issued on March 30, 2021, from U.S. Application 16/240,258, which was filed on January 4, 2019. Ex. 1001, codes (45), (21), (22). The '124 patent ultimately claims priority to U.S. Application 11/694,853, filed on March 30, 2007. *Id.* at code (63), 1:5–47. Petitioner expressly declines to challenge that the '124 patent is entitled such priority. *See, e.g.*, Pet. 7.

The '124 patent's abstract states:

> A method implemented on a plurality of client computers in communication with a server is disclosed. The plurality of client computers each display common content on an associated display area. The method includes generating messages representing user input received at one client computer of the plurality of client computers, the user input defining content to be shared with the plurality of client computers. The method includes causing the one client computer to transmit the generated messages to the server to elicit transmission of output messages from the server to each of the plurality of client computers, the output messages including information defining the content to be shared. The method includes, in response to receiving output messages from the server at each of the plurality of client computers, displaying the shared content over the common content on the respective display areas on each of the plurality of client computers.

Id. at Abstract.

As background, the '124 patent states:

> High bandwidth internet connections enjoyed by many computer users have facilitated new forms of online collaboration, allowing users to conduct multiple-party communications over an internet connection by sharing a

[2] Because some of the images of figures from the '124 patent in Exhibit 1001 appear to be missing some details, some figures reproduced here were obtained from the USPTO's public system for better clarity, as needed.

> common view of a displayed page in an internet browser window, for example. Users may post comments on the displayed page, which may be transmitted to all users, thus facilitating online discussion.
>
> However, such communications suffer from a common problem due to delays in transmitting posted comments and other information between the parties. In some cases these delays reduce the usefulness of an online communication since the parties do not feel a presence of other participants in the communication.
>
> Accordingly, there remains a need for communication systems and methods that improve a user's experience of such multiple-party communications in a computer network.

Id. at 1:60–2:9.

Responsive to this "need," the '124 patent provides a Summary of the Invention Section devoted entirely to embodiments where a game piece image displayed on one client computer is moved on that client computer and another client computer, each connected via a computer network with a server. *Id.* at 2:11–8:67. One example is described as follows:

> In accordance with another aspect of the invention there is provided a method for supporting ***movement of game piece images displayed on first and second client computers in communication with a server in a computer network***. The method involves ***receiving a piece movement request message at the server from one of the first and second client computers***, the piece movement request ***message representing a desired change in a position of a game piece image displayed on respective display areas of the first and second client computers***. The method further involves ***transmitting a piece movement message representing the desired change in the position of the game piece image to each of the first and second client computers*** when the desired change meets a criterion.

Id. at 5:45–58 (emphasis added). Several variations on this are disclosed in this same section of the Specification, but this portion is illustrative of the general process and system, and represents several of the claimed features of the invention.

A system supporting such a method is shown in Figure 1 of the '124 patent, which is reproduced below:

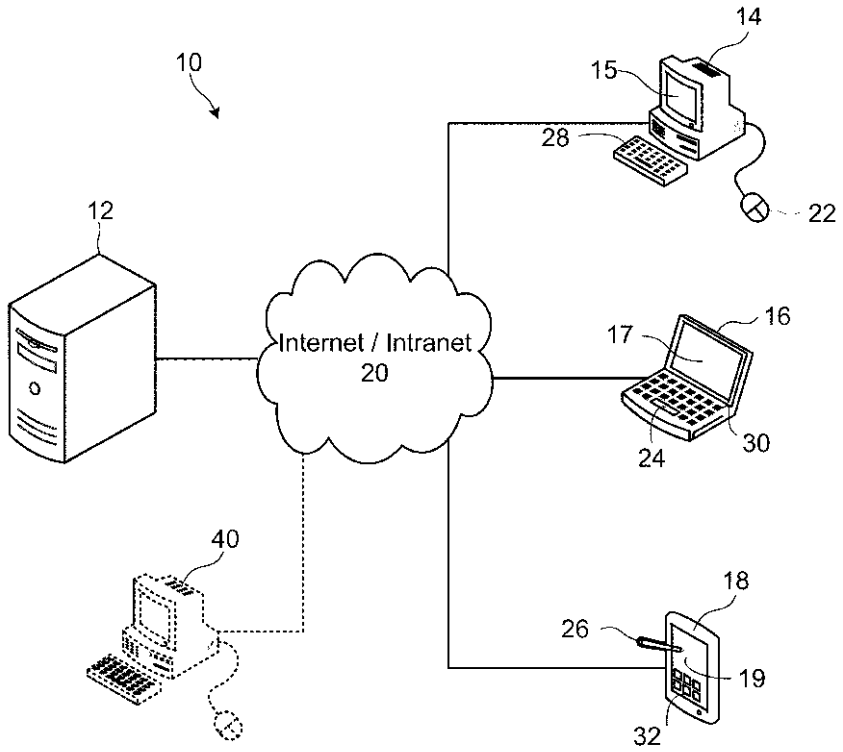

FIG. 1

"FIG. 1 is a schematic view of a system for supporting multiple-party communications in accordance with a first embodiment of the invention" and it shows "system 10 includes a server 12 and a plurality of client computers 14, 16, and 18." *Id.* at 9:5–7, 10:52–56. Figure 1 shows computer 14 as a conventional desktop computer, computer 16 as a laptop computer, and computer 18 as a handheld computer, where each is shown to

be individually connected to the Internet or intranet 20, and thereby to server 12 and one another. *Id.* at 10:56–66.

In relation to this image, the '124 patent describes:

> A feature of the system 10 is that while user input, such as movements of the pointing device 22 at the client computer 14, for example, are reflected almost immediately on the display 15 as a corresponding change in position of the cursor, the client computer also transmits a cursor message to the server to elicit a pointer message from the server. The cursor message represents a change in a position of the cursor in response to the user input received from the user of the client computer. The client computer 14 receives the pointer message from the server and causes a corresponding change in a position of a pointer associated with the cursor and displayed on the display 15 in response to the message, which represents the change in position of the cursor.
>
> It will be appreciated that there is a latency that occurs due to the round-trip time required for a cursor message transmitted by one of the client computers 14, 16, or 18 to reach the server 12, to be retransmitted by the server, and to be received back from the server at the client computers. Accordingly, the user producing the pointing device movement will see a time lag between the position of their cursor on their display and the position of the pointer associated with the pointer message received back from the server 12.
>
> Similarly, each of the client computers 16, and 18 also receive the pointer message representing the change in position of the cursor of the client computer 14, and cause a corresponding change in a position of a pointer associated with the client computer 14, which is displayed on the respective display areas 17 and 18 of the client computers in response to the pointer message.

Id. at 11:52–12:13.

Regarding the "messages" discussed in the quoted section above as being sent to and from the server, the '124 patent describes that in one

"embodiment, output messages are produced by copying the input messages" and "[i]n other embodiments output messages may have different formats and/or payload data to the input messages . . . and output messages may be produced by reading the payload of the input messages and generating a corresponding output message." *Id.* at 14:24–33.

An example of a display on a client computer is shown in Figure 11, reproduced below:

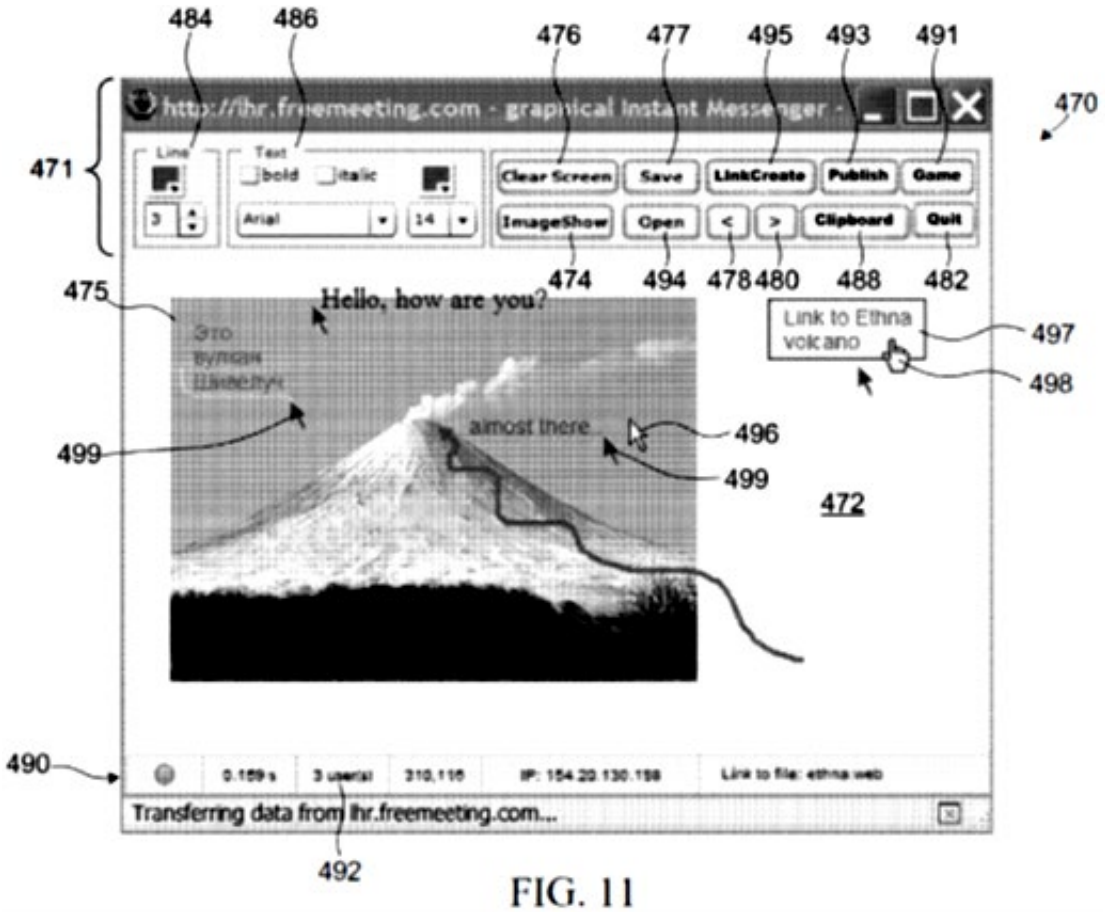

FIG. 11

"FIG. 11 is a screenshot of a user interface displayed on the client computers shown in FIG. 1." *Id.* at 9:31–32. Figure 11 shows user interface 470 having control panel 471 and display area 472. *Id.* at 22:13–14. Image 475 (a picture of a volcano or mountain) and the client computer cursor 496 (a

white arrow) and other client computer cursors 499 (also arrows, but black) are shown on display 472. Text and an elongated, black, squiggly arrow pointing to the peak of the volcano/mountain and extending out of the picture onto other parts of the display are shown superimposed over image 475. Regarding the cursors, the '124 patent describes:

> The client computer user's pointing device movements may be represented in real time by a cursor displayed by the operating system on the client computer display area 472 or by a stylus tip on a touch screen display area. Advantageously, the "MouseMove" message 346 facilitates transmitting the client computer user's pointing device movements to other client computers, which facilitates display of pointers corresponding to each of a plurality of client computers on the respective display areas 472 of the other client computers who have joined the multiple-party communication. The client computer that generates the "MouseMove" message 346 also receives a copy of the message back from the server, which facilitates display of a local pointer in addition to any cursor that may be displayed by the operating system. Advantageously, display of a cursor and a local pointer permits the client computer user to view the effect of their pointer movements, since while the cursor responds to pointing device movements in near real-time, the pointer only moves once the message representing the movement is received back from the server.
>
> Accordingly, when the pointing device is moved, the pointer generally trails the cursor, providing a useful view of a network latency associated with a round trip from one of the client computers 14, 16, or 18 to the server 12 and back again to the client computer.

Id. at 30:16–40. Further discussing Figure 11, the '124 patent describes that, because not all types of data are interchangeably displayable amongst computers,

> when the server 12 receives upload data (for example as an HTTP POST request from a client computer), the server reads

> the data to determine whether the upload data requires conversion. If the upload data is already in a supported image format then no conversion is required and the data is stored in the upload data store 106 and associated with the data identifier. If the upload data is not of a supported image format, the server invokes a conversion function to convert the upload data into a supported image format. Accordingly, the server may be configured with a plurality of common conversion functions covering many commonly used formatted data types (for example Microsoft Word and Excel applications). Conversion function program codes for producing image data from many formatted data types are generally available for license by software vendors and third party vendors.

Id. at 37:50–38:3.

The '124 patent describes that "the system for supporting multiple-party communications may further facilitate playing of a game between parties who have joined a multiple-party communication." *Id.* at 46:39–43. Figure 22, reproduced below, shows a game board 744 and game piece images 742 displayed with an interface 470, similar to Figure 11 (above):

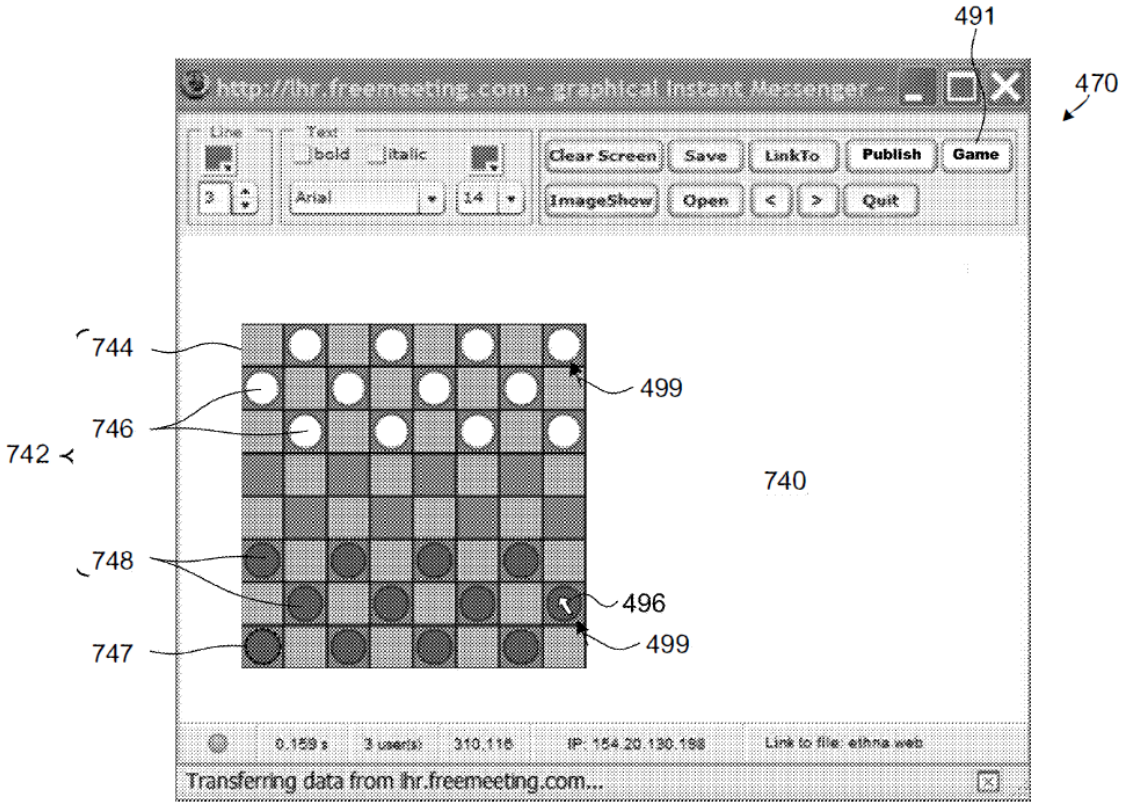

FIG. 22

"FIG. 22 is a screenshot of an alternate embodiment of a user interface displayed on the client computers shown in FIG. 1." *Id.* at 10:1–3. Figure 22 shows game piece images 742 (we understand a bracket spanning 744–748 in the image is partially missing) and game board image 744 as a checker board and checkers arranged thereon in their positions at the beginning of a game. The '124 patent describes that "the game board image 744 is displayed at a fixed coordinate position on the display area 740, while the game piece images 746 and 748 may be moved in response to user input signals received at the respective client computers." *Id.* at 47:43–48. "[G]ame piece images 746 and 748 are moved in response to cursor

messages representing "MouseDragged" user input signal combinations." *Id.* at 47:54–56. The '124 patent further describes:

> the server 12 only receives cursor messages and produces pointer messages which are transmitted to the client computers. When the client computers receive the pointer messages, the pointer messages are interpreted by the client computer processor circuit 260 to cause corresponding game piece image movements on each of the respective display areas 740, such that each user receives a common view of the game piece images 742. By causing game piece movements in response to pointer messages rather than the client computers real time cursor 496, the users are able to adjust their activity to account for any network latency when moving the game piece images.

Id. at 48:67–49:12. Or, "[t]he piece movement request messages 780 are transmitted by the client computers 14, 16, and 18 to the server 12 in response to user input signals representing movements that cross the boundary 747 or are within the boundary." *Id.* at 49:16–19.

"When a user of one of the client computers 14, 16, or 18 attempts to move one of the game pieces by producing user input signals within the boundary 747 of one of the game piece images 746 and 748, a piece movement request message 780 is produced and transmitted to the server 12." *Id.* at 49:49–53. Further, "[w]hen the piece movement message 780 meets the criterion, the game criteria program codes 78 directs the microprocessor 52 to produce a game piece movement message, which in this embodiment has the same format as the message 780. The piece movement message is then loaded into the shared buffer 88 and transmitted to the client computers." *Id.* at 50:21–27.

The '124 patent concludes with 14 claims, of which claims 1 and 8 are independent claims. Ex. 1012, 62:12–64:20. Claims 1 and 8 are illustrative

and reproduced below with added sub-numbering, as used by the parties (*see, e.g.*, Pet. 11–13; Prelim. Resp. 12–13):

> **[1P]** 1. A method implemented on a plurality of client computers in communication with a server over a computer network, the plurality of client computers each displaying common content on an associated display area, the method comprising:
>
> **[1.1]** generating messages representing user input received at one client computer of the plurality of client computers, the user input defining content to be shared with the plurality of client computers;
>
> **[1.3]** causing the one client computer to transmit the generated messages to the server to elicit transmission of output messages from the server to each of the plurality of client computers including the one client computer, the output messages including information defining the content to be shared; and
>
> **[1.3]** in response to receiving output messages from the server at each of the plurality of client computers, displaying the shared content over the common content on the respective display areas on each of the plurality of client computers including the one client computer.
>
> * * *
>
> **[8P]** 8. A method implemented on a plurality of client computers in communication with a server over a computer network, the plurality of client computers each displaying common content on an associated display area, the method comprising:
>
> **[8.1]** generating messages representing user input received at one client computer of the plurality of client computers, the user input defining content to be shared with the plurality of client computers;
>
> **[8.2]** causing the one client computer to transmit the generated messages to the server to elicit transmission of output messages from the server to each of the plurality of client

> computers including the one client computer, the output messages including information defining the content to be shared; and
>
> **[8.3]** in response to receiving output messages from the server at each of the plurality of client computers, displaying the shared content over the common content on the respective display areas on each of the plurality of client computers including the one client computer,
>
> **[8.3.1]** wherein displaying the shared content over the common content on the display area on the one client computer causes the shared content to be displayed with a latency that corresponds to a latency associated with transmission of the generated messages to the server and a latency associated with transmission of the output messages back to the one client computer.

Ex. 1001, 62:12–31, 62:57–63:16.

As can be seen above, claim 8 is identical to claim 1, but adds limitation 8.3.1 directed to a latency element of the claimed content displaying. *See* Prelim. Resp. 17 (Patent Owner identifying this). The '124 patent's claims 2–7 and 9–14 depend, directly or indirectly, from independent claims 1 and 8. *Id.* at 62:32–56, 63:17–64:20.

D. ASSERTED GROUNDS FOR UNPATENTABILITY

Petitioner asserts the following grounds for the unpatentability of claims 1–14 of the '124 patent:

Ground	Claims Challenged	35 U.S.C. §[3]	Reference(s)/Basis
1	1, 8	102	Roy[4]
2	1, 8	103	Roy
3	1–14	103	Simonoff,[5] Naef[6]
4	1, 2, 4, 6, 7	102	Chang[7]
5	1, 2, 4, 6–9, 11, 13, 14	103	Chang

See Pet. 8–9.

In support of the grounds for unpatentability Petitioner submits, *inter alia*, the Declaration of Loren Terveen, PhD (Ex. 1003). In support of its positions, Patent Owner submits the Declaration of Simon Sunatori (Ex. 2001).[8] At this stage of the proceeding, and in the absence of evidence

[3] The '124 patent has an uncontested March 30, 2007 priority date, which is before the AIA revisions to 35 U.S.C. §§ 102 and 103 took effect on March 16, 2013. 35 U.S.C. § 100 (note). Therefore, pre-AIA §§ 102 and 103 apply. Our decision is not impacted, however, by which version of the statute applies.

[4] U.S. Patent 5,838,909, issued Nov. 17, 1998. Ex. 1005 ("Roy").

[5] U.S. Patent 7,043,529 B1, issued May 9, 2006. Ex. 1006 ("Simonoff").

[6] U.S. Patent 5,206,934, issued Apr. 27, 1993. Ex. 1007 ("Naef").

[7] Zheng (Eric) Chang, *A Framework Design for Collaborative GIS Applications: Based on Hybrid Architecture* (2005) (published PhD thesis). Ex. 1008 ("Chang"); *see also* Ex. 1004 (Declaration of Gretchen Hoffman, PhD, testifying as to the authenticity and public availability of Chang).

[8] Mr. Sunatori's declaration, like Patent Owner's Preliminary Response, includes line numbering on each page, rather than the more customary formatting for witness declarations of numbering each paragraph. Again, the panel prefers the customary style of formatting and requests, if Patent

to the contrary, we find Dr. Terveen competent to testify as to the perspective and understanding of the person of ordinary skill in the art. *See infra* Section II.A; *see* Ex. 1003 ¶¶ 4–8, 28–30; *see also* Prelim. Resp. 5 (Patent Owner appearing to agree). Mr. Sunatori testifies that he is a "Research Engineer," an "Independent Inventor," a "Patentologist," and a "Patent Engineer." Ex. 2001, 2. The Panel is unfamiliar with the professions of research engineer, patentologist, and patent engineer, and it is unclear at this stage of the proceeding about what topics, precisely, Mr. Sunatori qualifies as an expert.

We review Petitioner's asserted prior art below.

II. DISCUSSION

A. LEVEL OF ORDINARY SKILL IN THE ART

In determining the level of ordinary skill in the art, we consider the types of problems encountered in the art, the prior art solutions to those problems, the rapidity with which innovations are made, the sophistication of the technology, and the educational level of active workers in the field. *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986).

Petitioner states,

> A person of ordinary skill in the art ("POSA") would have been a person having, as of the priority date of the '124 Patent: (1) at least an undergraduate degree in computer science or closely-related field, or similar advanced post-graduate education; and (2) 1-2 years of experience related to multi-user collaboration software.

Owner submits further declaration testimony, that it use paragraph-numbering rather than numbering each line.

Pet. 7 (citing Ex. 1003 ¶¶ 28–30).[9] Patent Owner states that it "adopt[s] Petitioner's proposed level of ordinary skill in the art because it comports with the technology and claims of the '124 Patent as well as the asserted prior art." Prelim. Resp. 5. Patent Owner adds that "[t]he expert witnesses of the parties are persons of (at least) ordinary skill in the art of the '124 Patent and its claims." *Id.*

We accept Petitioner's proposed definition of the person of ordinary skill in the art (or ordinarily skilled artisan), which appears to be consistent with the level of skill in the art reflected in the prior art of record and the disclosure of the '124 patent. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) ("the prior art itself [may] reflect[]" evidence of the ordinary level of skill in the art) (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985)).

B. CLAIM CONSTRUCTION

The Board interprets claim terms in an *inter partes* review using the same claim construction standard that is used to construe claims in a civil action in federal district court. 37 C.F.R. § 42.100(b). In construing claims, district courts and the Board here, by default, give claim terms their ordinary and customary meaning, which is "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

Should claim terms require express construction, sources for claim interpretation include "the words of the claims themselves, the remainder of the specification, the prosecution history [i.e., the intrinsic evidence], and extrinsic evidence concerning relevant scientific principles, the meaning of

[9] Petitioner uses "POSA" to refer to the person of ordinary skill in the art.

technical terms, and the state of the art." *Id.* at 1314 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)). "[T]he claims themselves [may] provide substantial guidance as to the meaning of particular claim terms." *Id.* However, the claims "do not stand alone," but are part of "'a fully integrated written instrument' . . . consisting principally of a specification that concludes with the claims," and, therefore, the claims are "read in view of the specification." *Id.* at 1315 (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978–79 (Fed. Cir. 1995) (en banc)). Any special definition for a claim term must be set forth in the specification "with reasonable clarity, deliberateness, and precision." *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). Without such a special definition, however, limitations may not be read from the specification into the claims. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

"[W]e need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy.'" *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

We now turn to the parties' positions on claim construction.

Petitioner states, "[a]t this time, no construction is necessary, as the claims are obvious under any reasonable construction." Pet. 7. This statement agrees with the testimony of Dr. Terveen. Ex. 1003 ¶ 24 ("Counsel has not instructed me to apply a construction of the claims notwithstanding their ordinary meaning. Therefore, I have applied the meaning of the claim terms of the Challenged Claims that is generally

consistent with their ordinary and customary meaning, as a person having ordinary skill in the art would have understood them in the context of the '124 Patent at the time of the alleged invention.").

Similarly, Patent Owner initially states that "[n]o formal claim constructions are necessary in the instant case because 'claim terms need only be construed to the extent necessary to resolve the controversy.'" Prelim. Resp. 5 (citing as quoting *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011)). However, Patent Owner then proceeds to insist that certain claim language must be specifically interpreted and bases its arguments against institution upon such proposed claim construction positions. We address these below.

1. "the output messages include information defining the content to be shared"

Patent Owner argues that the language "the output messages include information defining the content to be shared," which appears in claims 1 and 8, "means that the output message copies the input message (the output message is to the input message) or the output message include[s] the message of the input message but has different format." Prelim. Resp. 15 (citing Ex. 2001, 14, 15). The evidence in support of this proposed construction cited by Patent Owner consists solely of testimony by Mr. Sunatori.

In Section C of his Declaration, titled "Claim Construction," Mr. Sunatori offers no proposed claim constructions. Ex. 2001, 6. But, like the Preliminary Response, then at pages 14–15 of his Declaration, Mr. Sunatori concludes that the disputed language has the proposed meaning, parroting the Patent Owner, with no citation to other supporting

evidence. Thus, we give very little weight to Mr. Sunatori's testimony on this issue.

In its Preliminary Reply, Petitioner notes the inconsistency of Patent Owner's positions on claim construction, both identifying that claim construction is unnecessary and then proposing the above-indicated claim construction. Prelim. Reply 1. Petitioner argues that neither the disputed claim language itself nor the Specification supports Patent Owner's proposed claim construction because the claims simply state "that the output message includes *information* defining the content to be shared, not the input message itself or a copy of it." *Id.* Petitioner cites two portions of the '124 patent's written description that contradict Patent Owner's narrow definition of the claim language—the first indicating that input messages and output messages may be in different formats and have different data and that the output messages can be generated once the input messages are read (Ex. 1001, 14:27–33), and the second indicating that the output messages could combine multiple input messages, and that output messages represent input messages that themselves represent computer input such as a mouse drag (*id.* at 33:1–9).

We agree with Petitioner that the record does not support narrowing the meaning of the disputed claim language as argued by Patent Owner and, based on the present record, we do not expressly construe this claim language.

2. "displaying the shared content over the common content on the respective display areas"

Patent Owner also argues (again, after asserting no claim construction is needed) "that 'displaying the shared content over the common content on the respective display areas,'" which appears in claims 1 and 8, "means that

the client computer needs receive only changed information from the server based on the shared content over the common to display." Prelim. Resp. 16 (immediately citing no evidence in support). As a part of this argument, Patent Owner states that, according to the '124 patent description, "client computers will display the resulting image and will be able to **draw lines and type characters over the image**. Ex[.] 1001, 28:48-52." *Id.*

Petitioner argues that the claim language "uses the open-ended [transition term] 'comprises,'" meaning the claims themselves do not limit the defined method to only the expressly recited steps, and asserts that Mr. Sunatori improperly assumes that the claim must be limited to a specific embodiment of the Specification. Prelim. Reply 2–3 (citing *Vivid Techs.*, 200 F.3d at 811; Ex. 2001, 18). As a part of its argument, Petitioner again cites the '124 patent's written description as supporting "that the payload data included in an output message may be different from that which is included in an input message." *Id.* at 3 (citing Ex. 1001, 14:27–33).

Based on Patent Owner's argument alone, i.e., that the '124 patent describes updating client computer displays with drawn lines and typed characters over an image (Prelim. Resp. 16), we do not discern why the claims require "only changed information" be sent from the server to the client computers because showing drawn lines or typed text does not appear to equate to showing *only changed information* as a requirement. Moreover,

> [w]hile [we] may look to the specification and prosecution history to interpret what a patentee meant by a word or phrase in a claim, extraneous limitations cannot be read into the claims from the specification or prosecution history. . . . In other words, [we] may not read into a claim a limitation from a preferred embodiment, if that limitation is not present in the claim itself.

Bayer AG v. Biovail Corp., 279 F.3d 1340, 1348 (Fed. Cir. 2002). We discern no evidence to support Patent Owner's proposed claim construction narrowing the meaning of the identified claim language and we will not read limitations from the Specification into the claims absent any support in the record requiring such an interpretation.

Therefore, we also do not expressly construe this claim language.

C. APPLICABLE LEGAL STANDARDS

"In an IPR, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable." *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify "with particularity . . . the evidence that supports the grounds for the challenge to each claim")). This burden of persuasion never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).[10]

An *inter partes* review may be instituted if the information presented by Petitioner in the Petition, in view of Patent Owner's Preliminary Response and the preliminary record, shows that there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition. 35 U.S.C. § 314.

"Anticipation requires that all of the claim elements and their limitations are shown in a single prior art reference." *In re Skvorecz*, 580 F.3d 1262, 1266 (Fed. Cir. 2009). To anticipate "it is not enough that the

[10] At times, herein, we may refer to certain of Patent Owner's arguments as being unpersuasive. We do not, however, ever shift the ultimate burden to Patent Owner and such unpersuasiveness is only in the context of Petitioner's arguments and the record.

prior art reference discloses part of the claimed invention, which an ordinary artisan might supplement to make the whole, or that it includes multiple, distinct teachings that the artisan might somehow combine to achieve the claimed invention." *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008). "However, a reference can anticipate a claim even if it 'd[oes] not expressly spell out' all the limitations arranged or combined as in the claim, if a person of skill in the art, reading the reference, would 'at once envisage' the claimed arrangement or combination." *Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1381 (Fed. Cir. 2015) (quoting *In re Petering*, 301 F.2d 676, 681 (CCPA 1962)).

Regarding obviousness, the Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), reaffirmed the framework for determining obviousness set forth in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). The *KSR* Court summarized the four factual inquiries set forth in *Graham* (383 U.S. at 17–18) that are applied in determining whether a claim is unpatentable as obvious under 35 U.S.C. § 103 as follows: (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art;[11] and (4) considering objective evidence indicating obviousness or non-obviousness.[12] *KSR*, 550 U.S. at 406.

"The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* at 416. "[W]hen the question is whether a patent claiming the

[11] *See supra* Section II.A.
[12] At this stage of the proceeding, there is no evidence pertaining to objective indicia of non-obviousness. *See* Prelim. Resp.

combination of elements of prior art is obvious," the answer depends on "whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id.* at 417.

With these standards in mind, and in view of the definition of the ordinarily skilled artisan, we address Petitioner's challenges below.

D. PETITIONER'S ASSERTED PRIOR ART

1. Roy

Roy issued on November 17, 1998, from U.S. Application 652,803, which was filed on May 23, 1996. Ex. 1005, codes (45), (21), (22). There is no dispute at this stage of the proceeding that Roy is prior art. *See generally* Prelim. Resp.

Regarding its disclosed invention, Roy's Abstract states:

> A method and apparatus for reducing network latency during execution of a multiple-player game across a computer network are provided. A master database represents a world model for the game, and a master event server sequences user inputs, or events, for updating the master database. The master event server and the master database are initially located on a particular node in the network. Every other node that is used by a player in the game has a slave event server and a slave database. Slave event servers are responsible for updating their local slave database, sending events from their local node to the master event server, and forwarding events to and from other slave servers. In the method, a determination is made of which player in the game has a role in the game requiring the least latency of any role and which node in the network is being used by that player. The master event server and the master database are then migrated to that node by changing the status of the slave server of that node to that of master event server. Once the master event server has been migrated, other slave servers can establish a direct connection with the new master event server.

Ex. 1005, Abstract.

As noted in its Abstract, Roy's disclosure focuses on multiplayer gameplay (e.g., football or role-playing fantasy games) on networked computers and discloses centralized networks relying on a central server and a modified network where a user with a more prominently active role becomes a slave-server for the game to reduce latency. *See generally id.*

Roy explains that when the game is simulated football, at any given point in the game a player will be the offense, responsible for moving players and controlling their speed and direction, with "substantial interaction with the game world," and another player will be the defense and might be responsible for selecting predefined defensive patterns (for players). *Id.* at 3:23–35. Further, when the game is a role-playing fantasy game, one player acts as a "superhero" and is very active (with the game world) and other players might only participate in a peripheral manner (e.g., by setting game conditions, selecting obstacles for the hero). *Id.* at 3:35–47.

Roy illustrates a basic network at Figure 1, reproduced below:

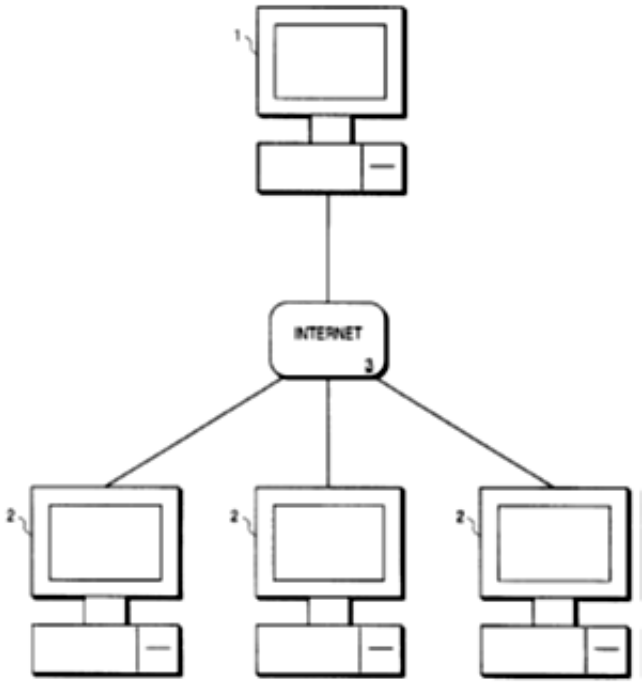

Figure 1 shows a network configuration for its invention including central server computer 1 and client computer systems 2 connected via Internet 3 to central server computer 1 and one another. *Id.* at 3:48–56. Server 1 and each computer 2 includes game software with various application program interfaces (APIs) providing an interface to operating system software.

Communications between such computer systems and the central server are illustrated by Figure 4B, reproduced below:

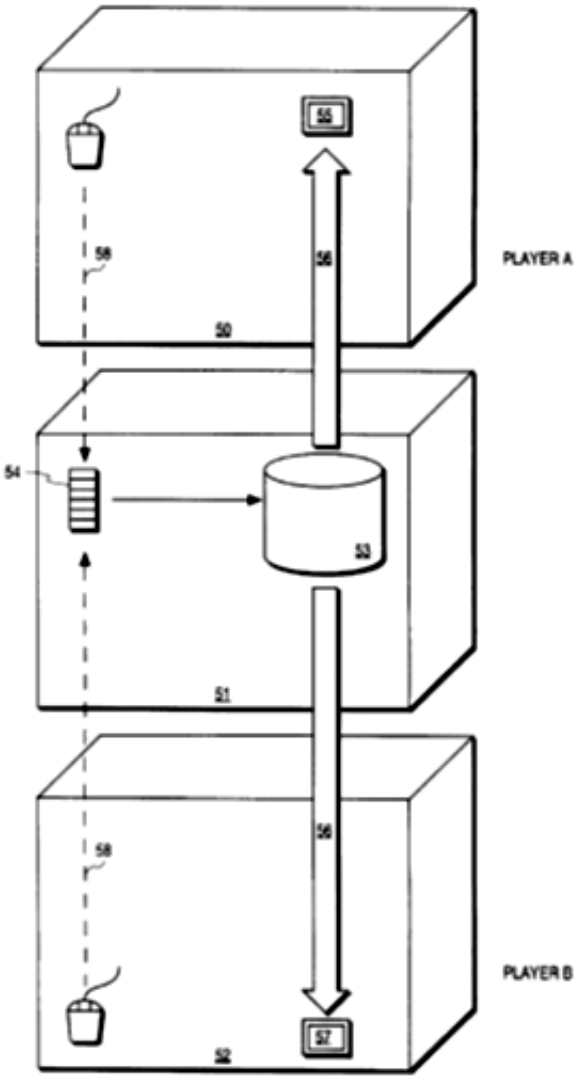

FIG. 4B (PRIOR ART)

Figure 4B, which is labeled as prior art by Roy, illustrates "a well-known configuration for implementing a multi-user game on a network," where client computer systems 50, 52 are networked with central server 51, which houses database 53 storing the "game world" for the multi-user game. *Id.* at 4:18–22. Computers 50, 25 are two players (A and B) of the game. *Id.* at 4:21–22. Roy discloses that software 54 on central server 51 receives events 58 (understood to be the players' inputs for game-play acts, e.g., for the football or role-playing game noted above—*see id.* at 1:32–35) communicated from computers 50, 52 and provides the events 58 to central server's 51 database 53 in order to update the game world (as the game is played). *Id.* at 4:23–26. Roy explains that, to do this, "[r]endering commands 56 are then sent from the updated database 53 in the central server 51 across the network to update the displays 55 and 57 of client computers 50 and 52, respectively." *Id.* at 4:26–29. Thus, in this embodiment of Roy, a central server receives communications from networked client computers about game events, the central server uses those communications to update the game being played, and then the central server communicates those updates to the client computers and changes the game displayed on those computers accordingly. *Id.* at 3:15–4:29.

The main concept of Roy's invention is that one of the client computers having the most active role in the game, i.e., the player most affected by any latency, is tasked with being a slave server and becomes responsible for updating the displays of all player's computers based on events. *Id.* at 4:30–5:49. The overall network, however, does not change,

other than the player computers having slave copies 68 of the master database 71 from central server 66. *Id.*; *see also id.* Fig. 5A.

2. Simonoff

Simonoff issued on May 9, 2006, from U.S. Application 09/551,364, which was filed on April 17, 2000. Ex. 1006, codes (45), (21), (22). There is no dispute at this stage of the proceeding that Simonoff is prior art. *See generally* Prelim. Resp.

Regarding its disclosed invention, Simonoff's Abstract states:

> A White Board system permitting a plurality of users to collaborate with one another irrespective of the respective user's hardware platform or operating system, includes a server computer, and a plurality of client computers coupled to the server computer. Preferably, each of the client computers logs into the server computer and is thereby assigned a unique identifier, each of the client computers includes a graphical user interface (GUI) which selectively displays any combination of objects having active content, active hyperlinks, and text, each of the client computers transmits user-generated objects to the server computer for selective retransmission to respective one of the client computers, the server selectively controls transmission of all user-generated objects to respective ones of the computers responsive to the respective assigned identifier, and the server commands one of the client computers to update a new client computer when the new client computer logs into the server. A method for operating a computer network to facilitate collaboration between users and software for implementing the method are also described.

Ex. 1006, Abstract. A computer network as mentioned in the Abstract is illustrated at Figures 2 and 3, reproduced side-by-side below:

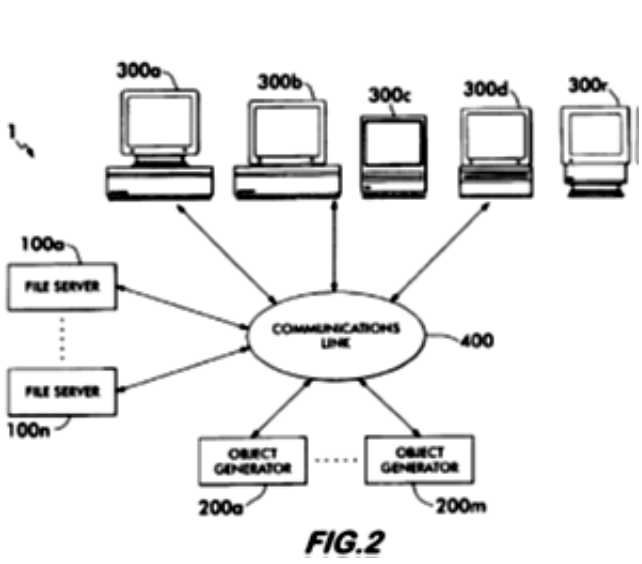

FIG.2

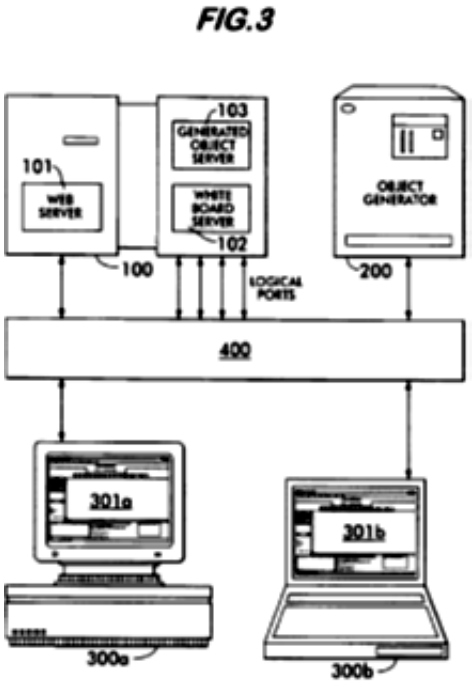

FIG.3

Fig. 2 (above-left) shows "a high-level block diagram of a computer system according to [Simonoff's] invention," and Fig. 3 (above-right) shows "a high-level block diagram of selected components of the computer system according to [Simonoff's] invention illustrated in FIG. 2, which illustrates the operation of one of the several alternative operation techniques permitted by [Simonoff's] invention." *Id.* at 11:22–28. Each of Figs. 2 and 3 show computer system 1 having servers 100, 100a–100n connected to computers 300a–300r via communications link 400 (a LAN or WAN, or other interconnection). *Id.* at 12:32–67. Also shown are object generators 200a–200m, which generate data, which may be in the form of images (e.g., maps, tickers, radar, status boards, satellite images, video, etc.). *Id.*

As background information, Simonoff discloses:

> As discussed in U.S. Pat. No. 5,206,934 [Naef, Ex. 1007], which patent is incorporated herein by reference for all purposes, when a user performs an operation in a stand-

> alone application with an input device such as a mouse or keyboard, an event is generated by the operating system and passed to the application program for execution. The stand-alone application interprets the events and performs operations to change its internal data in response to the users' request. Such events include, for example, performing a deletion step in a word processing program or creating a graphic element in a computer-aided design (CAD) program.
>
> When the application is expanded from a single user into a multiple user environment, such as simulating a conference over a network or a modem, each user must be able to manipulate the same data and see all of the modifications made to the data.

Id. at 3:24–39. Simonoff discloses that, in such a system, "each machine intercepts visual outputs to the screen and sends it to all other users so that they see the same screen. A program which performs such a function is sometimes referred to as a remote control program. Under such schemes, one machine acts as a host and contains all of the data that is manipulated. The other machines pass user inputs to the host machine and receive screen change commands back." *Id.* at 3:66–4:6.

Simonoff discloses its invention provides

> for selectively generating predetermined objects, text objects, active hyperlink objects, active track objects, freehand drawing objects, images and 3D images which are displayable at user-selected locations on a White Board screen of one of the users, transmitting all generated ones of the predetermined, the active hyperlink, the text, the active track, and the freehand drawing objects, the images and the 3D images for selective distributions to each of the other users, and filtering the predetermined, the active hyperlink, the text, the active track, and the freehand drawing objects, the images and the 3D images to thereby permit selective retransmission of the predetermined, the active hyperlink, the text, the active track,

and the freehand drawing objects, the images and the 3D images to respective ones of the other users.

Id. at 6:66–7:13.

Such a White Board is illustrated by Figure 4, reproduced below:

FIG. 4

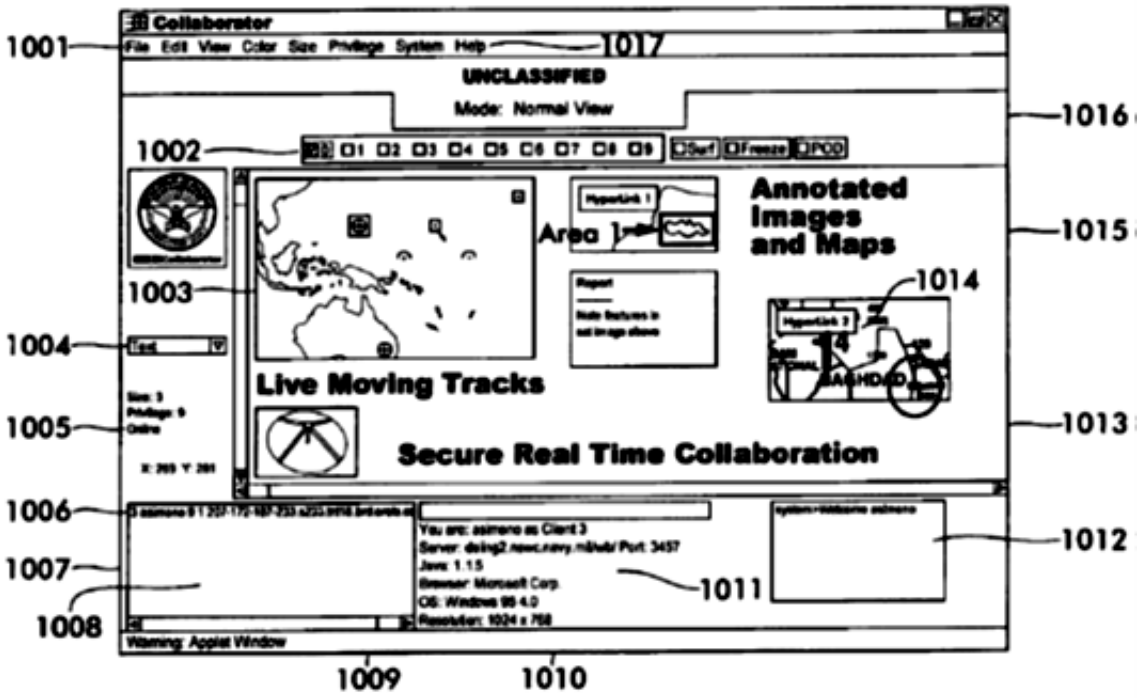

Figure 4, an "illustration of a computer screen depicting the White Board," shows a "File drop down menu" 1001, which "includes commands for both uploading and downloading files to the White Board server 102," for example, a map file resident on computer 300a could be downloaded from the server 100 or uploaded thereto; such a map image 1003 is shown on the White Board. *Id.* at 11:29–30, 14:6–27, 18:46–50. The White Board has "a plurality of layers . . . upon which the user can draw or type." *Id.* at 17:21–23. Simonoff discloses that "an active track wherein the track changes over time advantageously can be generated by an object generator computer 200 and transferred over the LAN 400 to the generated object

server 103, and thence back over the LAN 400 to all of the White Board clients 301a and 301b running on computers 300a, 300b." *Id.* at 18:51–56. Further, Figure 4 above also shows White Board drawing area 1013, which includes the map image 1003, and "moving tracks advantageously can be marked up, i.e., by freehand lines, boxes, ovals, etc., to highlight or annotate the material contained therein." *Id.* at 20:64–21:1. The "user draws on the White Board client 301a" or does something else on the White Board, which generates an event, and thereby a selected object (e.g., a freehand line or a shape) can be instantiated, such object is transmitted to White Board server 102 over the LAN network 400, "[t]he White Board server 102 then relays the command onto the other White Board clients." *Id.* at 22:8–23:64.

"[W]hen all users are equal in privilege . . . the White Board server would be able to multi-case to all White Board clients at the same time." *Id.* at 24:24–27; *see also id.* at Fig. 11A and 31:14–37 (simulcast from the server is relayed to computers other than the one initiating the annotation so the White Board, e.g., to clients 301b and 301c when the command came from 301a).

3. Naef

Naef issued on April 27, 1993, from U.S. Application 393,876, which was filed on August 15, 1989. Ex. 1007, codes (45), (21), (22). There is no dispute at this stage of the proceeding that Naef is prior art. *See generally* Prelim. Resp. As noted above, Naef is incorporated by reference into Simonoff's disclosure. *See* Ex. 1006, 3:24–25.

Regarding its disclosed invention, Naef's Abstract states:

> A method and apparatus for conferencing among a plurality of computers is described. A local user receives inputs containing user actions and data for interpretation as to what the user

> action is with respect to the data and produces user action outputs. An interpreter/encoder interprets and encodes the user action outputs into packets of encoded commands and data related thereto. A communications device sends the encoded information to at least one remote user and the local user itself. An interpreter decoder at each computer interprets and decodes the encoded information specifying an operation to be performed on the data. The operation is then executed at the local user and the remote users. The system is operating system independent and multiple documents and applications may be worked on at the same time by different users.

Ex. 1007, Abstract.

Naef states that "[i]n a traditional computer application, when a user performs an operation with an input device such as a mouse or keyboard, an event is generated by the operating system and passed to the application program for execution." *Id.* at 1:11–15. Further, "[w]hen the traditional application is expanded from a single user into a multiple user environment, such as simulating a conference over a network or a modem, each user must be able to manipulate the same data and see all of the modifications made to the data. To do this, each machine must interpret and transmit information about what the user is doing and what the user is seeing." *Id.* at 1:21–26.

Naef further states that, "with a centralized architecture, performance limitations are incurred because at least two message transmission delays result between the originating work station and the controller and then back. While the time delay may be reduced by inter-work station communications, a controller work station is required and conflicting commands must be reversed or reexecuted." *Id.* at 2:18–26.

Naef proposes to overcome such issues with a system where "any computer may communicate directly with any other connected computer. The commands from one computer are assembled as packets and are sent to

itself and to other connected computers. The computer which is addressed receives the packets and converts and routes the commands to modify data and optionally to modify the user's view of the data." *Id.* at 2:43–54. According to Naef, under such a system, "[a]ny connected computer may directly affect the other computers within the system." *Id.* at 54–56.

To this end, Naef discloses:

> Each user input 18 in addition to being locally processed, that is sent to itself, is also communicated over the communication link 14 as an input to the Interact application 16 of each of the other computers. The Interact application 16 in each computer 12A-12N interprets the user input 18 and performs the data manipulation. Similarly, a user input 18 effected in computer 12B is input to the Interact application 16 for manipulating the data 22 therein and likewise user inputs are communicated over the link 14 to the other computers in the form of remote inputs to their Interact applications 16 for manipulation of the data 22. All data manipulations assure that the resulting change is the same in each machine.

Id. at 4:20–32.

4. Chang

Chang is the PhD thesis paper of Zhen (Eric) Chang, written while a student at Ryerson University, and bears a copyright notice by Mr. Chang dated 2005, as well as a copyright notice by ProQuest LLC dated 2008. Ex. 1008, 3–4.[13] Dr. Gretchen Hoffman, a Professor in the School of Library and Information Studies at Texas Woman's University and professional librarian, testifies that Exhibit 1008 is an authentic copy of Chang and that the reference was published and publicly available to interested persons no later than March 8, 2006. Ex. 1004 ¶¶ 5–7, 26–32. At

[13] We cite to the added page numbering of Chang, located in the lower right corner of each page, as does Petitioner.

this stage in the proceeding there is no dispute that Chang is prior art as a printed publication. *See generally* Prelim. Resp.

Chang identifies challenges in multi-user data and application sharing across different user locations on a computer network, where the users need real-time collaboration (Chang refers to such as a Geographic Information System (GIS)), for example, pointing to features or circling an area on a map to make intentions clear, a type of computing technique Chang calls Computer Supported Cooperative Work (WSCW) or groupware. Ex. 1008, 19–21. Chang identifies several groupware categories and products, including "[s]hared whiteboards" as in "GroupDraw" and "GroupS[k]etch," "[a]pplication sharing systems" for "[b]roadcasting graphics, mouse movements, and edits to all participants," and "[c]ollaborative virtual environments" that are "populated with avatars that can navigate and interact with other people and objects in the environment," as some examples. *Id.* at 27–30.

Chang identifies the "NetMeeting system, which is considered as a video conferencing system, also includes a shared application and shared whiteboard." *Id.* at 31. Chang discloses that this Microsoft® product (in 2000) "enables real-time voice and data communications over the Internet," which "includes the ability for two or more people to share applications, transfer files, view and illustrate a shared whiteboard, and chat over standard connections" and that "a user can share a program running on one computer with other participants in the conference. Participants can review the same data or information, and see the actions as the person sharing the application works on the program (for example, editing content or scrolling through information)." *Id.* at 33.

Additionally, Chang describes architectures for such computer networking, one of which is "a centralized architecture," where "only one instance of [an] application runs in a central server. The server is responsible for controlling all input and output to the distributed end-users. A sequence of events generated by end-use interaction are collected and sent to the central server." *Id.* at 44. Chang illustrates such an architecture at its Figure 2.7, which we reproduce below:

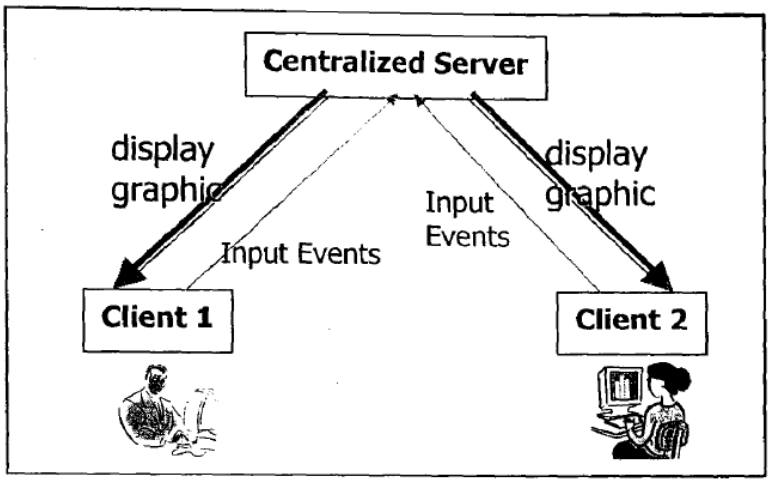

Figure 2.7 Centralized architecture

Id. at 45. Chang describes that Figure 2.7 shows "[t]he output of the shared application must be broadcast[] to all participating users for visualization" and the illustration shows a first computer user called "Client 1" and a second computer user called "Client 2" connected to one another via a "Centralized Server," where each user sends "Input Events" to the "Centralized Server," which outputs a "display graphic" to each user's computer. *Id.* at 44–45. Chang indicates that Microsoft's NetMeeting® (as of 1999) was an example of such a centralized architecture, which had the

advantage of "guarantee[ing] consistency of shared data," but required higher bandwidth to distribute display information to all end-users. *Id.* at 45.

Chang discloses a "Replicated" architecture where each client machine has the entire application installed and some means of synchronization between them is provided; there is no centralized server and input events and graphics output are processed locally. *Id.* at 45–46. Then, Chang discloses a "[h]ybrid (semi-replicated)" architecture, where some components may require sharing and others may be replicated, which is a composition of centralized and replicated architectures. *Id.* at 46. Under such an architecture, sometimes users' computers communicate directly with one another and sometimes they communicate via a central (base) system that provides output. *Id.* at 46–47, Figure 2.9.

Chang expands on how a centralized server network functions compared to a replicated system and provides Figure 4.1, which compares the two systems, and which we reproduce below:

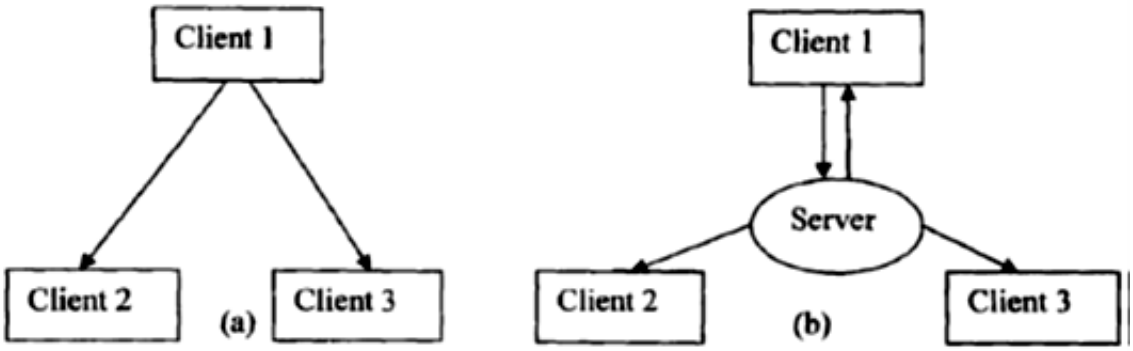

Figure 4.1 Event distribution ordering

Id. at 63. Figure 4.1 shows a first architecture at (a) where Clients 1, 2, and 3 are interconnected via Client 1, which is shown providing output to each of Clients 2 and 3. Figure 4.1 also shows a second architecture at (b)

where Clients 1, 2, and 3 are interconnected by a central Server, where Client 1 provids input to the Server and the Server provides output to each of Clients 1, 2, and 3. *Id.* Chang states that

> Figure 4.1 describes two approaches about event distribution when Client 1 operates the application and wants to send event messages to other clients (Client 2 and Client 3). Approach (a) will cause inconsistent situation when Client 2 also is operating the application at the same time.
>
> Approach (b) will not cause inconsistency because the Client 1 first sends the messages to a Server and then the Server sends the messages to all the clients. Because of the server, all the messages produced by the clients will be broadcast[] with certain order.

Id. at 62–63.

Describing how the two architectures may be implemented as a hybrid, Chang discloses the following steps:

> 1. When a user, for example Replica 1, operates GUIs of Java applets or client application that handle GIS contents in one client, the event messages are first triggered and sent to the collaboration component at the same client.
>
> 2. Collaboration component serializes and sends them to the collaborative server in the server side.
>
> 3. The collaborative server distributes the messages to the collaborative component of every client who joins the same session including the client who creates the event.
>
> 4. After reconstructed, these events are finally sent to the GIS component to carry out the same functions as host client does.
>
> 5. The GIS component may go to single shape file or Web Map Service with data proxy server to load data.

Id. at 67–68.

Chang discloses one way of providing remote user collaboration is to provide pseudo-layer(s) over a root and content pane holding the original

material, where "[t]he pseudo-layer is a Glass pane in a frame" as shown in Figure 4.7, reproduced below:

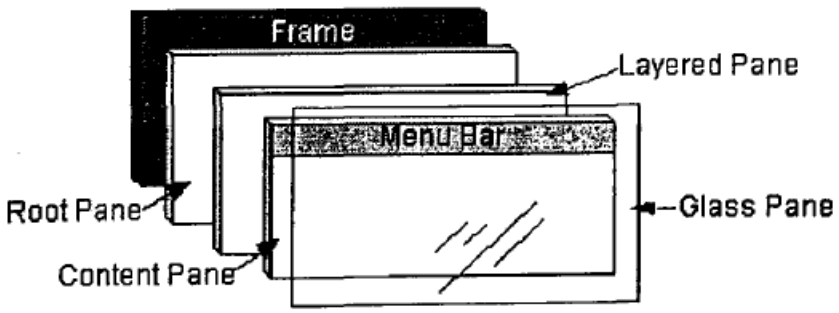

Figure 4.7 Glass Pane [Sun, 2005]

Id. at 71. Figure 4.7 shows the aforementioned "Glass Pane" as a transparent layer over a "Content Pane" (which has a "Menu Bar"), which is over a "Root Pane," each of which are "Frame[s]." *Id.* Chang explains that

> The GIS component intercepts all the user events (mouse, keyboard, input focus events) using a transparent GUI component called Glass Pane, which is available in the Swing toolkit. It is at the topmost Zorder to cover the bean's GUI area and intercepts all the user's events, without occluding the underlying Java component. The Glass Pane can also be dynamically shrunk or expanded, thus allowing easier management of public and private areas of the same workspace. An additional benefit is the accompanying visual effects on the remote sites as well (e.g., mouse click results in a depressed button).

Id. at 72. According to Chang, "The Collaborative component handles replica collaborative function including floor control, session management, message sending, parsing, and reconstructing and so on. This component uses approach (1)," where the system "slightly modifies the application code to relate to the collaboration framework class." *Id.* at 70–72.

Chang provides illustrations of a collaboration environment called GeoLink where a map image can be shared and annotated by remote users; we reproduce these images below:

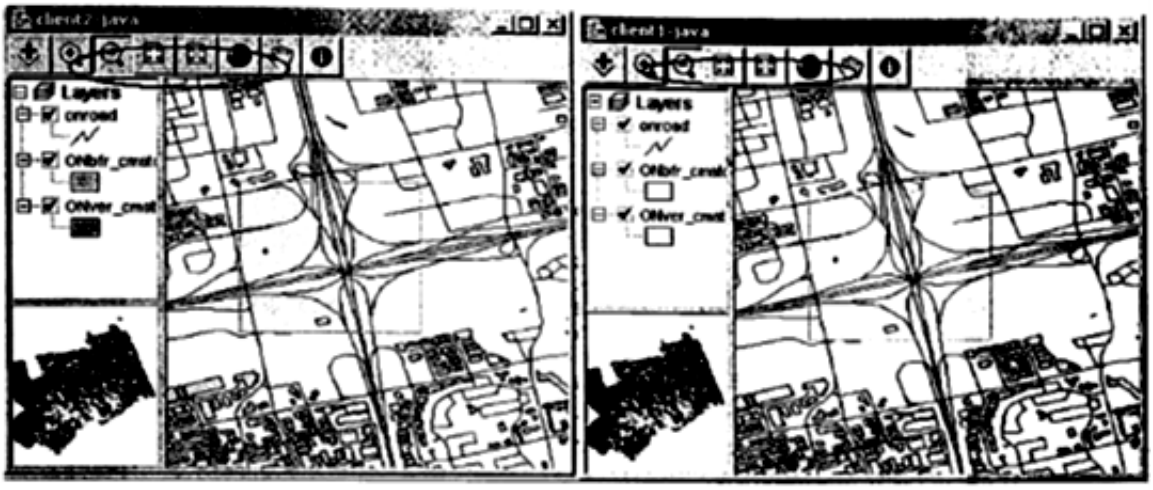

Figure 5.13 Zoom and Pan functions of GeoLink

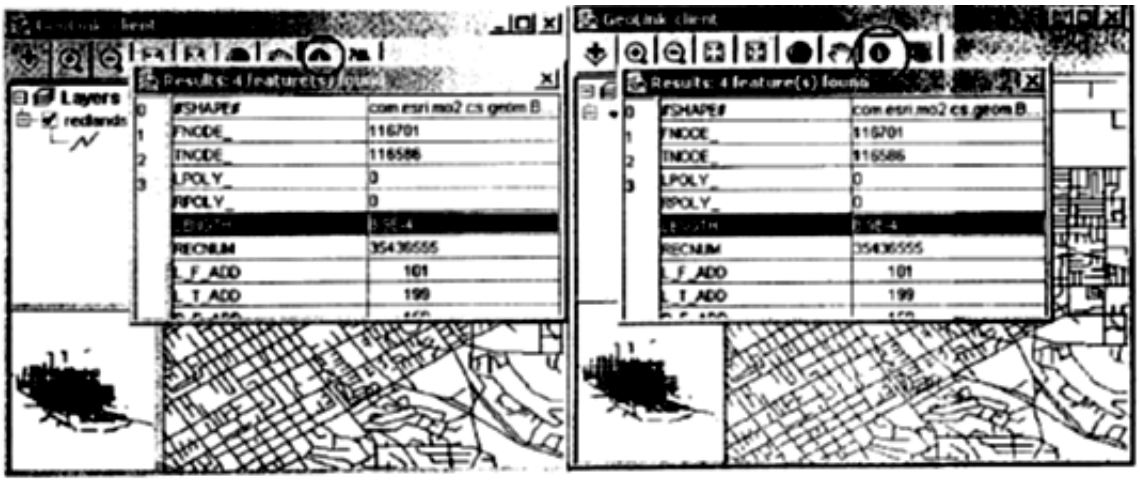

Figure 5.14 Identify map features

Id. at 99. Chang states that Figure 5.13 (above top) shows that "*GeoLink* possesses basic GIS map browse functions including zoom in, zoom out, pan, zoom to full extent, zoom to identified rubber windows," and that

Figure 5.14 (above bottom) "shows that one client is viewing the attributes of the features the other client is identifying." *Id.* at 98–99.

E. PETITIONER'S PATENTABILITY CHALLENGES

As summarized above, Petitioner asserts five grounds for unpatentability of the claims of the '124 patent. *See supra* Section I.D; *see also* Pet. 8–9. We review Petitioner's challenges and Patent Owner's arguments below.

1. Anticipation by or Obviousness over Roy (Grounds 1 & 2)

Petitioner's Grounds 1 and 2 address independent claims 1 and 8, and assert that each would have been anticipated by or obvious over Roy. *See* Pet. 10–23. Petitioner and Patent Owner each addresses these grounds together and so do we, with the understanding that the law on anticipation and obvious is not the same.

Petitioner begins by discussing the disclosure of Roy, generally, much as we have set forth above. *See id.* at 10–11 (citing Ex. 1003 ¶ 55; Ex. 1005, Abstract, 1:37–48, 3:16–22, 4:18–29, 5:17–6:14, Figs. 5A, 5B); *see supra* Section II.D.1. Petitioner identifies, as an initial matter, that Roy discloses an apparatus (system or network) and method having the basic necessary components of the claims, i.e., a server, multiple client computers networked with the server, all configured for playing a multi-player game. Pet. 10 (citing Ex. 1005, 1:37–48, 3:16–22). Petitioner identifies that Roy discloses, in conducting the game, that the server receives user-input events from these client computers and then sends rendering commands to update the displays of those client computers. *Id.* (citing Ex. 1005, 4:18–29, 5:17–6:14, Figs. 4B, 5A, 5B).

Petitioner also maps the limitations/steps of claim 1 to the disclosure of Roy. *Id.* at 11–21. Regarding claim 1's preamble (1P), "*[a] method implemented on a plurality of client computers in communication with a server over a computer network, the plurality of client computers each displaying common content on an associated display area, the method comprising*" (italics added), Petitioner asserts that Roy discloses such a method where a central server on a computer network, such as the Internet, connects a plurality of client computers for, e.g., playing a game, at Figure 1, where the client computers each display common game world content rendered by the server. *Id.* at 11–15 (citing Ex. 1003 ¶¶ 53, 56; Ex. 1005, 1:26–37, 1:40–48, 3:16–33, 3:35–56, 4:6–29, Figs. 1, 4A, 4B).

Regarding claim 1's step 1.1, "*generating messages representing user input received at one client computer of the plurality of client computers, the user input defining content to be shared with the plurality of client computers*" (italics added), Petitioner asserts that Roy discloses this in its client computers generating events, i.e., the claimed "messages representing user input," such as mouse clicks, during gameplay that represents some game action by the player that must be shared with and viewed by other players. *Id.* at 15–16 (citing Ex. 1003 ¶¶ 47, 52; Ex. 1005, 1:28–37, 3:66–4:1, 4:9–15, 4:21–29, 7:50–52).

Turning to claim 1's step 1.2, "*causing the one client computer to transmit the generated messages to the server to elicit transmission of output messages from the server to each of the plurality of client computers including the one client computer, the output messages including information defining the content to be shared*" (italics added), Petitioner asserts that Roy discloses this in the client computers transmitting input

events (claimed input "messages") to the central server running the game, which in turn updates the game world and transmits rendering commands (claimed "output messages") to all the client computers to display updates to game world (the "content to be shared") on their computer displays. *Id.* at 16–19 (citing Ex. 1003 ¶ 54; Ex. 1005, 1:30–37, 1:40–43, 3:23–29, 4:6–15, 4:21–29, Fig. 4B).

Regarding claim 1's final step 1.3, "*in response to receiving output messages from the server at each of the plurality of client computers, displaying the shared content over the common content on the respective display areas on each of the plurality of client computers including the one client computer*" (italics added), Petitioner asserts that Roy discloses this in its central server receiving input from client computers on gameplay and then updating the client computers' displays with updated scenes of the game world, where the displayed game accurately reflects the current history of user inputs, the underlying game world (e.g., a field of play) is "common content," as recited, and the gameplay events (e.g., football players movements on the field) are "shared content over that common content," as recited. *Id.* at 19–21 (citing Ex. 1003 ¶¶ 57, 58; Ex. 1005, 1:26–37, 3:23–29, 3:35–56, 4:13–15, 4:21–29, 4:44–54, Figs. 4A, 4B).

Regarding claim 8, Petitioner notes it is largely identical to claim 1, but as to the sole additional step 8.3.1, "*wherein displaying the shared content over the common content on the display area on the one client computer causes the shared content to be displayed with a latency that corresponds to a latency associated with transmission of the generated messages to the server and a latency associated with transmission of the output messages back to the one client computer*" (italics added), Petitioner

asserts that this is disclosed by Roy because this is inherently how a multiplayer game played on a central server and networked client computers works. *Id.* at 22–23 (citing Ex. 1003 ¶¶ 48, 59–60; Ex. 1005, 1:30–43, 4:21–29, Fig. 4B). Petitioner asserts that because Roy's central server runs and updates the game on each client computer, including on the client computer that submits a game event message, the claimed latency naturally occurs as there would be a delay associated with the transmission of the input event from the client to the server and then again at the transmission of the rendering commands from the server to the client computers, and all players have the same latency because the server updates them all. *Id.* (citing Ex. 1003 ¶¶ 59–60; Ex. 1021).

We find Petitioner has accounted for the disclosure in Roy of every step and element of claims 1 and 8, either expressly or inherently, for the purposes of showing anticipation. As to any not-expressly disclosed elements of the claims in Roy's disclosure, Petitioner asserts that a person of ordinary skill in the art would have read Roy as disclosing the claimed subject matter even though not using the identical terminology of the claims (noting that, for some elements, e.g., "common content," the '124 patent's written description itself does not use such terminology), and Petitioner also asserts that such subject matter also would have been obvious to the extent any disclosure of Roy may not meet the standards for anticipation. *See* Pet. 11, 14–15, 16, 19–21, 22.

Turning to Patent Owner's arguments, as noted above, like Petitioner, Patent Owner addresses Grounds 1 and 2 over Roy together. Prelim. Resp. 12–18.

Patent Owner first argues that Roy does not teach limitation 1.2 ("causing the one client computer to ***transmit the generated messages to the server to elicit transmission of output messages from the server*** to each of the plurality of client computers including the one client computer, the ***output messages including information defining the content to be shared***" (italics and bolding added)). *Id.* at 13. Patent Owner argues that the '124 patent describes output messages, as claimed, as being produced by copying the input messages in a shared buffer and also where output messages have different message identifiers than input messages or different formats than input messages (citing Ex. 1001, 32:63–67; Ex. 2001, 14) and, based on this, Patent Owner proffers its above-identified claim construction for this claim language as requiring that the output messages be either *copies of the input messages* or that they *include the input messages* even where the output messages are in a different format. Prelim. Resp. 14–15. According to Patent Owner, Roy's events messages, which Petitioner equates to the claimed input messages, are not necessarily included in Roy's server-outputted commands that update the game world on client computers and, so, the claim requirements of limitation 1.2 are not met. *Id.* at 15.

Similarly, Patent Owner argues that Roy does not teach claim limitation 1.3 ("in response to receiving output messages from the server at each of the plurality of client computers, ***displaying the shared content over the common content on the respective display areas on each of the plurality of client computers including the one client computer***" (italics and bolding added)). Prelim. Resp. 15. Patent Owner argues that the '124 patent describes the displaying of shared content over common content as drawn lines and typed characters over an image. *Id.* at 16 (citing Ex. 1001,

28:48–52). Based on this, Patent Owner asserts its above-noted proposed claim construction of this claim language as requiring *only changed information* from the server is sent to client computers. *Id.* According to Patent Owner, Roy does not disclose shared content (game events) being displayed over common content because Roy only discloses displays are updated and this does not include only changed information, per Patent Owner's claim construction position. *Id.*

Patent Owner makes no separate arguments over claim 8. *Id.* at 12–18.

As noted above, we are not persuaded by Patent Owner's arguments for the aforementioned claim constructions, and do not adopt either at this stage in this proceeding. *See supra* Section II.B. Therefore, Patent Owner's arguments over Grounds 1 and 2 are also not persuasive as they are foundationally reliant on such an adoption of Patent Owner's claim constructions. Petitioner has reasonably explained how claims 1 and 8 are disclosed by Roy, expressly or inherently, and so are anticipated or would have been obvious. We find that, based on the preliminary record, Petitioner sufficiently shows that there is a reasonable likelihood that it would prevail at trial in establishing that independent claims 1 and 8 are anticipated by or would have been obvious over Roy.

2. Obviousness over Simonoff and Naef (Ground 3)

Under Ground 3 Petitioner asserts claims 1–14 (all claims) would have been obvious over Simonoff and Naef combined. Pet. 23–50. Petitioner introduces Simonoff and Naef, generalizing that the former discloses a collaboration tool, called a White Board, for networked computer users interconnected by a server computer where the client computers

transmit user-generated objects to the server, which multi-casts such objects, e.g., annotations, to all clients at the same time, and Petitioner asserts that the latter teaches similar peer-to-peer computer networking (minus the expressly-utilized central server, although acknowledging centralized architectures existed) where a client computer's input is relayed as a message to all networked computers including the one generating the input. *Id.* at 23–26; *see also* Ex. 1003 ¶¶ 67, 70 (discussing Simonoff and Naef).

Petitioner maps the disclosures of the prior art to the claimed steps and elements. Pet. 26–50. Regarding claim 1's preamble (1P), Petitioner asserts that Simonoff discloses a method performed in a distributed computer system network with a server and connected client computers communicating therethrough, each one displaying a graphical user interface (GUI) White Board with common content for remote collaboration. *Id.* at 26–29 (citing Ex. 1006, Abstract, 1:33–42, 11:66–12:67, 13:11–16, 13:27–33, 13:37–67, 21:39–43, 22:10–31, 23:26–32, 24:27–30, Figs. 2–4, 7, 12A–12H).

Regarding claim 1's limitation 1.1 (generating messages representing user input defining content to be shared)[14] Petitioner asserts that Simonoff discloses it or renders it obvious because Simonoff discloses its client computers generating *user-generated objects* representing user's input (data messages to the server), such as mouse movements or annotations or drawings, intended to be shared with the other client computers using the White Board file. *Id.* at 30–32 (citing Ex. 1003 ¶¶ 63–65; Ex. 1006,

[14] For brevity, we paraphrase the claimed steps here and below, recognizing that there are more specific limitations recited.

Abstract, 6:66–7:13, 15:1–16:67, 19:8–43, 20:64–21:1, 22:8–23:3, 28:14–42, Figs. 9A–9B, 10A–10F).

Regarding limitation 1.2 (client computer transmits the messages to the server, server transmits output messages to each client computer with information defining content to be shared), Petitioner asserts Simonoff and Naef together teach this step because Simonoff discloses the client computer transmitting messages (as discussed above) to the server, which transmits (multi-casts) to the client computers annotations or similar events to be shown on client computers, and Naef teaches that the original client transmitting messages on input also would receive the annotation event output messages from the server. *Id.* at 32–34 (citing Ex. 1003 ¶¶ 65; Ex. 1006, Abstract, 6:66–7:13, 23:60–24:3, 26:66–27:8, 28:17–42, 31:29–37; Ex. 1007, Abstract, 2:47–51, 3:2–5, 5:29–40, 7:32–41, Figs. 2, 4A, 4B). Naef does not use a central server for receiving client computer input messages and outputting display messages, but Petitioner identifies that Naef teaches the local user's input actions (e.g., mouse clicks) and data are received by an "interpreter/encoder" that outputs packets of encoded commands and data, which are sent to the local user originating the input and to at least one remote user, specifying operations to be performed. *Id.* at 34 (citing Ex. 1007, Abstract, 2:47–51, 3:2–5, 5:29–40, 7:32–41, Figs. 2, 4A, 4B).

Petitioner asserts the ordinarily skilled artisan would have combined these teachings of Simonoff and Naef because Naef's entire disclosure is already incorporated by reference in Simonoff, and "returning the source client's annotations back to that client for display," as in Naef, "would have had the advantages of avoiding conflicts between user inputs and allowing

the source client to see the edits as the other clients would see them," when implemented in Simonoff's multi-casting method, which Petitioner asserts already suggests this feature because the "multi-cast [is] to all clients at the same time." *Id.* at 34–35 (citing Ex. 1003 ¶¶ 39–44, 71–73; Ex. 1006, 3:24–29, 24:22–27). Petitioner asserts that the person of ordinary skill in the art would have had a reasonable expectation of success because the programming techniques involved were well-known and predictable, and would have involved only minor software modifications (if any) to Simonoff's system, and because central server architectures were known. *Id.* at 35–37 (citing Ex. 1003 ¶¶ 74–76; Ex. 1007, 2:19–26; Ex. 1008; Ex. 1015).

As to the final claim 1 limitation 1.3 (all client computers display the shared content over common content), Petitioner asserts the Simonoff and Naef combination teaches this because Simonoff discloses the server sending output commands to all client computers and those computers display annotations of users over common White Board content, and that Naef confirms that the input-originating client computer would also receive such server commands and display the same shared-over-common content—per Simonoff, all users see the same screen, e.g., a common map with user's freehand markups thereover. *Id.* at 37–41 (citing Ex. 1006, Abstract, 1:38–45, 3:66–4:1, 6:66–7:13, 8:36–59, 17:40–50, 23:60–24:3, 24:22–27, 24:48–53, Figs. 4, 7, 12A–12H; Ex. 1007, 2:41–56, 4:19–35, 4:64–5:4, 7:12–13, 9:7–36, Figs. 1, 4A, 4B).

Petitioner asserts that the person of ordinary skill in the art would have been motivated to modify Simonoff so that server commands for display were sent to all client computers, including the input-originating

computer, because that "would avoid conflicts in different users entering information and allow editing users to see the shared content consistently with other users" and also, in certain contexts (e.g., where an instructor and student are networked), "the sender would see how the presented material looked to students and avoid [confusion, e.g.,] getting ahead in a lesson." *Id.* at 40–41 (citing Ex. 1003 ¶ 73); *see also* Ex. 1003 ¶ 74 (testifying as to reasonable expectation of success per only predictable, minor software modifications to Simonoff).

As for the limitation added for claim 8, that is 8.3.1 (latency in display corresponding to transmission to and by server), Petitioner asserts it would have been obvious over Simonoff and Naef because this is "simply . . . the nature of systems in which a server would return shared content back to the source client for display," which Naef and Simonoff confirm about centralized collaboration systems. Pet. 41–42 (citing Ex. 1002 ¶¶ 39, 59, 77–79; Ex. 1006, 3:24–25, 4:32–39, 23:26–32; Ex. 1007, 2:18–22).

We find Petitioner has accounted for every step and element of claims 1 and 8 in the disclosure of the combination of Simonoff and Naef, either expressly or inherently, or based on the understanding of the asserted prior art by the ordinarily skilled artisan, for the purposes of showing obviousness. Pet. 23–42. As to any not-expressly disclosed elements of the claims in Simonoff's or Naef's disclosures, Petitioner asserts that a person of ordinary skill in the art would have read the respective reference as disclosing the claimed subject matter even though not using the identical terminology of the claims. *See id.* Petitioner has provided a reasonable explanation as to why a person of ordinary skill in the art would have combined Simonoff and Naef to achieve the claimed invention (e.g., direct Simonoff's client

computer input messages to a server and then multi-cast an output message from the server to all networked computers, including the originating client computer, as in Naef) with a reasonable expectation of success and has shown that the references are already combined by Simonoff's incorporation of Naef by reference. *See id.* at 33–41.

Patent Owner argues that Simonoff does not teach limitation 1.2 (client computer transmits messages to server to elicit server output to all clients defining content to be shared) because Simonoff does not indicate that the message-generating client computer receives the server output during the "multi-cast" to all clients. Prelim. Resp. 19–21 (citing, *inter alia*, Ex. 2001, 20; Ex. 1006, Fig. 11A). Patent Owner continues on this point, arguing that Naef also does not teach limitation 1.2 because Naef does not disclose a server, but teaches that the local computer originating the message sends it to itself and other computers, with no server involved. *Id.* at 22–23 (citing, *inter alia*, Ex. 2001, 23–24).

Although there may be a reasonable debate whether or not either Simonoff or Naef individually teaches the interplay between a client computer and a server and other client computers, as claimed, Petitioner's ground is not based on either reference alone (although, it is also arguable that Simonoff fully includes Naef's disclosure by incorporation). "Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references. . . . [The reference] must be read, not in isolation, but for what it fairly teaches in combination with the prior art as a whole." *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986); *see also Enzo Life Sci., Inc. v. Becton, Dickinson & Co.*, 780 Fed. App'x 903, 910 (Fed. Cir. 2019) (citing

In re Merck for this point). And, further, when considering obviousness, the prior art must be considered for all of its teachings, including unpreferred embodiments. *See Merck & Co. v. Biocraft Labs., Inc.,* 874 F.2d 804, 807 (Fed. Cir. 1989). With this precedent in mind, we restate that Simonoff's disclosure appears to fully include Naef's disclosure. Ex. 1006, 3:24–29. Further, both references apparently identify the existence and general functionality of central-server systems for remote computer collaboration where the server is in charge of updating all networked computers' displays, even if Naef's disclosed invention is not such a system, but instead puts a client computer in control. *See generally* Ex. 1006; Ex. 1007. Finally, Petitioner's witness, Dr. Terveen, testifies that the person of ordinary skill in the art would have had good reason to "improve Simonoff's similar collaboration system" by having its server return update/annotation messages back to the source client along with the other clients during its "multi-casting," as suggested by Naef, because this would "avoid[] conflicts between user inputs and [would] allow[] the source client to see the edits as the other clients would see them. Ex. 1003 ¶73 (citing Ex. 1015, 12:56–67; Ex. 1008, 45; Ex. 1006, 24:22–27).

At this stage of the proceedings, we credit Dr. Terveen's testimony and find Petitioner's position reasonable. We are not persuaded by Patent Owner's arguments or evidence at this stage (we are not entirely sure what qualifies Mr. Sunatori's as a reliable witness at this point) so as to dissuade us from instituting trial on this ground.

Regarding dependent claims 2–7 and 9–14, Petitioner similarly maps the limitations of the claims to the teachings of the Simonoff-Naef combination. *Id.* at 42–50. For the purposes of this decision we will not

review or analyze these assertions, although they will be considered in any final decision. In any event, Patent Owner makes no separate arguments over claims 2–14 than made concerning claim 1, addressed above. Prelim. Resp. 24–25.

Petitioner has reasonably shown how claims 1–14 would have been obvious over Simonoff and Naef. We find that, based on the preliminary record, Petitioner sufficiently shows that there is a reasonable likelihood that it would prevail at trial in establishing that these claims would have been obvious.

3. Anticipation by or Obviousness over Chang (Grounds 4 & 5)

Under Grounds 4 and 5 Petitioner asserts that Chang either anticipates or renders obvious claims 1, 2, 4, 6–9, 11, 13, and 14. Pet. 51–71. Petitioner provides an overview of Chang's teachings, similar to our review at Section II.D.4 above. Most relevant, Petitioner identifies that Chang is directed to networked computers collaborating on shared content and reviews central, replicated, and hybrid architectures for so doing. *See id.* at 54–55 (citing Ex. 1003 ¶¶ 38–45; Ex. 1008, 21, 22, 48, 68).

Beginning with claim 1, Petitioner asserts that Chang teaches the subject matter of claim 1's preamble (1P) in disclosing methods of implementing computer-supported cooperative work between networked remote users in communication over a server, where all client computers view the same content (common content), such as a map. *Id.* at 55–58 (citing Ex. 1008, 7, 21, 33, 44–47, 67–68, Figs. 2.7, 4.3).

Regarding limitation 1.1 (generating messages representing user input), Petitioner asserts Chang teaches the step because Chang discloses end-user inputs generating event messages in a collaborative session, for

example editing or highlighting content or scrolling through information over some common content such as a map, as shown in Chang's Figure 5.15, which are sent to a server for sharing with others. *Id.* at 58–61 (citing Ex. 1008, 30, 33, 45, 53–54, 59, 62–63, 68–69, 71–73, 98–99, Figs. 4.1, 5.14).

Petitioner asserts that limitation 1.2 (client computer transmitting generated message to the server to elicit output messages including information on content to be shared) is taught by Chang because the reference discloses, in both centralized and hybrid architectures, that a server manages input from all users and the distribution of output to all users for visualization, e.g., events are generated by end-user interaction with content and they are collected by the central server, which outputs the shared application as a broadcast to all participants. *Id.* at 61–63 (citing Ex. 1003 ¶¶ 82–83; Ex. 1008, 45, 63–64, 68, Figs. 2.7, 4.1).

Finally, regarding limitation 1.3 (the server outputting messages to each client computer including that originating the input to display shared content over common content), Petitioner asserts that Chang teaches it in disclosing centralized architectures where the server dictates the display of shared applications on all the client computers, including the source client, where the source client sends event messages to the server and the server sends the messages to all the clients to avoid inconsistencies. *Id.* at 63–65 (citing Ex. 1003 ¶ 80; Ex. 1008, 4, 63–64, 68, 71–73, Fig. 2.7). Further, Petitioner asserts that shared content, e.g., map annotations and mouse movements, is displayed over common content, e.g., the map. *Id.* at 65 (citing Ex. 1008, 99, Figs. 5.13, 5.14).

Regarding claim 8's added limitation 8.3.1 (display with a latency), Petitioner asserts that in Chang's disclosed centralized architecture, where displays are updated only after the server receives input and then sends output to client computers, such latency as claimed necessarily occurs. *Id.* at 66–67 (citing Ex. 1003 ¶¶ 41, 45, 86–87; Ex. 1008, 44–45, Fig. 2.7; Ex. 1014). Thus, it is Petitioner's contention, once more, that claim 8 recites only the natural functioning of a centralized architecture.

We find Petitioner has accounted for every step and element of claims 1 and 8 the disclosure of Chang, either expressly or inherently, and based on the understanding of the asserted prior art of the ordinarily skilled artisan as of the invention, for the purposes of showing anticipation or obviousness. Pet. 55–67. We turn to Patent Owner's arguments.

Patent Owner argues Petitioner's position on Chang fails because:

> A person of skill in the art would not have had any reasonable expectation of success in making the combination because using well-known and predictable programming techniques coupled with minor software modifications to any system would not be achieve such result absent inventiveness step. Certainly, combining the teachings of Simonoff would not result in "displaying the shared content **over** the common content on the respective display areas on each of the plurality of client computers including the one client computer" which is beyond the abilities of the collaboration-transparent groupware system known at time of the '124 Patent's earliest effective priority date. EXH2001, page 29, lines 9-10, page 30, lines 1-6.

Prelim. Resp. 25–26.

This argument appears misplaced because Simonoff is not asserted by Petitioner in combination with Chang. *See generally* Pet.

Patent Owner also argues that Chang fails to teach limitation 1.3 because "the client computer needs receive only changed information from

the server based on the shared content over the common display," which is an argument premised on Patent Owner's claim construction, which we indicated above we decline to adopt and, so, this argument is not persuasive here. Prelim. Resp. 27–28; *see supra* Section II.B.

Relatedly, Patent Owner argues Chang does not teach limitation 1.3 requiring shared content is displayed over common content. *Id.* at 28–29. This also is not persuasive in view of Chang's illustrations at, e.g., Figures 4.7, 5.13, and 5.14, showing that Chang's methods and systems allow a user's cursor movements, annotations, and text scrolling to be displayed in layers over a commonly displayed map background. Ex. 1008, 71, 99.

Regarding dependent claims 2, 4, 6, 7, 9, 11, 13, and 14, Petitioner similarly maps the limitations of the claims to the teachings of Chang. *Id.* at 42–50. For the purposes of this decision we will not review or analyze these assertions, although they will be considered in any final decision. In any event, Patent Owner makes no separate arguments over these dependent claims than made concerning claim 1, addressed above. Prelim. Resp. 29–30.

Petitioner has reasonably explained how claims 1, 2, 4, 6–9, 11, 13, and 14 are anticipated by or would have been obvious over Chang. We find that, based on the preliminary record, Petitioner sufficiently shows that there is a reasonable likelihood that it would prevail at trial in establishing that these claims would have been anticipated or obvious.

III. CONCLUSION

Petitioner demonstrates a reasonable likelihood of prevailing at trial in showing that at least some of claims 1–14 of the '124 patent are anticipated by or would have been obvious over the cited prior art. Our decision at this

stage derives from our review of the preliminary record before us. In accordance with the Court's decision in *SAS*, 138 S. Ct. at 1359–60, and USPTO regulations (37 C.F.R. § 42.108(a)),[15] we institute *inter partes* review of all challenged claims (1–14) of the '124 patent on all grounds asserted by Petitioner.[16]

This decision does not reflect a final determination on the patentability of the claims. No arguments from the Preliminary Response carry over to trial and any arguments not made in Patent Owner's Response may be considered waived.[17]

ORDER

Accordingly, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314, an *inter partes* review of claims 1–14 of the '124 patent, in accordance with all grounds in the Petition, is hereby instituted; and

[15] 37 C.F.R. § 42.108(a) ("When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.").
[16] The Board must institute on all grounds and all claims if it does so for any. Patent Owner should address each ground at trial or else risk waiving arguments. In the interest of efficiency, Petitioner has the option to reconsider whether to pursue all grounds asserted in the Petition as the proceeding enters the trial stage.
[17] *See* Consolidated Trial Practice Guide 52 (Nov. 2019) ("Once a trial is instituted, the Board may decline to consider arguments set forth in a preliminary response unless they are raised in the patent owner response."); *In re NuVasive, Inc.*, 842 F.3d 1376, 1381 (Fed. Cir. 2016) (patent owner waived an issue presented in its preliminary response not renewed in its response at trial).

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review will commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

IPR2022-01142
Patent 10,963,124 B2

For PETITIONER:

Michelle Aspen
Jordan Rossen
UNIFIED PATENTS, LLC
michelle@unifiedpatents.com
jordan@unifiedpatents.com

For PATENT OWNER:

William P. Ramey, III
Jacob B. Henry
RAMEY LLP
wramey@rameyfirm.com
jhenry@rameyfirm.com
uspto@rameyfirm.com